

COMMUNICABLE DISEASE CENTER



Vol. 15, No. 12

WEEKLY
REPORTWeek Ending
March 26, 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

CURRENT TRENDS

MALARIA IN THE UNITED STATES, 1966

This week 5 cases of malaria were reported in the United States through the National Morbidity Reporting System, bringing the total number of cases reported in 1966 to 67. The Parasitic Disease Unit of the Communicable Disease Center has received additional epidemiological information on 47 of the malaria cases reported through March 26, all of which have had onsets during 1966. Twenty-two of these cases occurred in military personnel who were diagnosed in the United States, 18 cases occurred in civilians, and 7 were known malaria cases transferred to the United States for treatment.

Of the 22 military cases, 19 contracted malaria in Viet Nam, and one case each was imported from Thailand, Panama and Korea. In the 19 military cases from Viet Nam,

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the species was *Plasmodium falciparum* in 8 cases, *P. vivax* in 10 cases, and *P. malariae* in one case.

The 18 civilian cases include two merchant seamen and six Peace Corps workers. Only one of the 18 cases acquired the disease in Viet Nam. Of the 16 cases in which the country of origin is known, Africa was the source of infection in 10 cases.

The seven cases transferred to the United States for therapy were military personnel who acquired their disease in Viet Nam. All had *falciparum* malaria.

CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	12th WEEK ENDED		MEDIAN 1961-1965	CUMULATIVE, FIRST 12 WEEKS		
	MARCH 26, 1966	MARCH 27, 1965		1966	1965	MEDIAN 1961-1965
Aseptic meningitis	20	27	16	341	335	268
Brucellosis	6	2	7	43	45	76
Diphtheria	5	—	6	34	51	81
Encephalitis, primary:						
Arthropod-borne & unspecified	17	28	—	274	360	—
Encephalitis, post-infectious	17	18	—	195	170	—
Hepatitis, serum	24	—	—	269	—	—
Hepatitis, infectious	685	770	933	8,561	9,495	12,960
Measles (rubeola)	9,469	11,272	15,519	85,000	105,866	129,117
Pollomyelitis, Total (including unspecified)	—	1	3	3	3	37
Paralytic	—	1	3	2	3	32
Nonparalytic	—	—	—	—	—	—
Meningococcal infections, Total	125	111	60	1,186	1,012	691
Civilian	114	105	—	1,025	941	—
Military	11	6	—	161	71	—
Rubella (German measles)	2,175	—	—	15,554	—	—
Streptococcal sore throat & Scarlet fever	13,611	11,974	11,118	140,291	134,601	120,080
Tetanus	2	4	—	24	42	—
Tularemia	2	3	—	46	52	—
Typhoid fever	5	2	6	60	78	78
Typhus, tick-borne (Rky. Mt. Spotted fever)	—	—	—	9	6	—
Rabies in Animals	135	96	96	956	1,176	923

NOTIFIABLE DISEASES OF LOW FREQUENCY

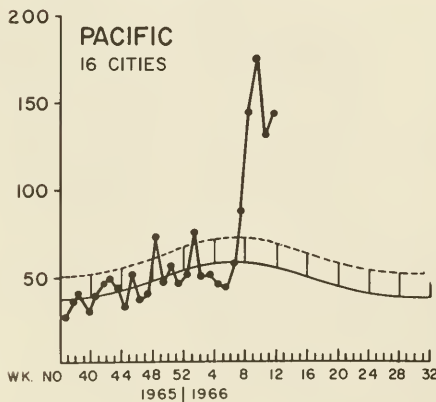
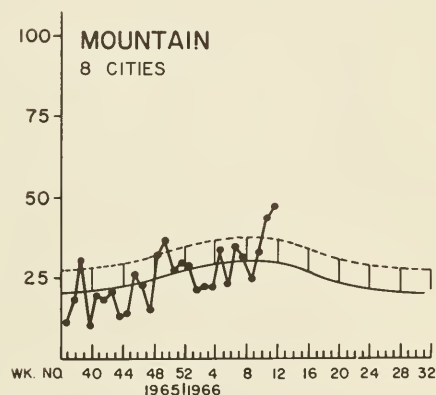
	Cum.		Cum.
Anthrax:	2	Botulism:	1
Leptospirosis: Texas-1	9	Trichinosis: N.C.-1, Tenn.-1	25
Malaria: D.C.-1, N.Y. Up-State-1, Pa.-2, Calif.-1, P.R.-1	67	Rabies in Man:	—
Psittacosis: Wisc.-1	14	Rubella, Congenital Syndrome:	9
Typhus, murine: Conn.-1, Texas-1	4		

INFLUENZA - UNITED STATES

During the week ending March 26, 1966, reporting of influenza outbreaks to the CDC has shown a general decline. Of particular interest is the continued reporting of influenza virus isolates not associated with generalized outbreaks. In Idaho where type A2 influenza outbreaks have been confirmed, there has been a single isolation of type B influenza virus from a patient not associated with an outbreak.

Excess mortality due to influenza and pneumonia deaths as measured in 122 U.S. cities continues above the epidemic threshold for the 4th consecutive week.

Figure 1
PNEUMONIA - INFLUENZA DEATHS IN
MOUNTAIN AND PACIFIC REGIONS - U.S.



The areas contributing to this rise are the Pacific and Mountain Regions (Figure 1).

(Reported by the Influenza-Respiratory Disease Unit, CDC.)

Table 1
United States Influenza Summary - 1965-66 (Winter)

State	First Recognized	Laboratory Confirmation	
		Isolation	Serology
Lab. Confirmed Outbreaks			
Florida	Nov.	B	B
Georgia	Dec.	B	B
Alabama	Jan.	...	B
California	Jan.	A2	A
Connecticut	Jan.	...	B
Massachusetts	Jan.	B	B
Rhode Island	Jan.	...	B
Vermont	Jan.	B	B
Alaska	Feb.	B	...
Dist. of Col.	Feb.	B	...
Idaho	Feb.	A2	A
Illinois	Feb.	B	B
Maine	Feb.	B	...
Maryland	Feb.	B	...
Michigan	Feb.	B	...
New Jersey	Feb.	B	...
New York	Feb.	B	...
North Carolina	Feb.	...	B
Ohio	Feb.	...	B
Oregon	Feb.	B	A,B
Pennsylvania	Feb.	B	...
Texas	Feb.	...	B
Virginia	Feb.	B	...
Washington	Feb.	B	A,B
Colorado	Mar.	A2	...
Oklahoma	Mar.	A2	A,B

Influenza Virus Identification

(non-outbreak)			
Illinois	Jan.	A2	...
Iowa	Feb.	A2	A
Kansas	Feb.	A2	...
Michigan	Feb.	A2	...
Idaho	...	B	...

Influenza-like Illnesses

Arizona	Feb.
Nevada	Feb.
New Hampshire	Feb.
West Virginia	Feb.
Delaware	Mar.
Montana	Mar.
Nebraska	Mar.
New Mexico	Mar.
Louisiana	Mar.
Tennessee	Mar.
Wisconsin	Mar.

... Information not available

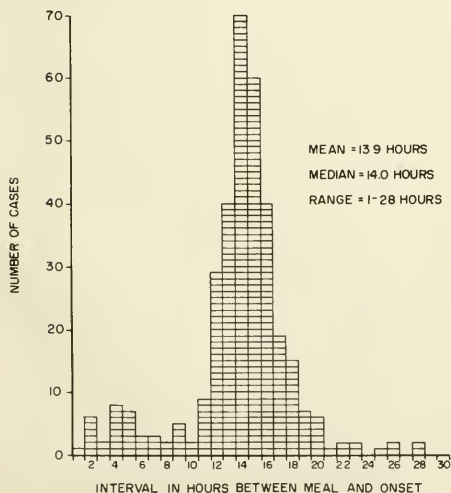
(Compiled from reports submitted by State Health Departments and collaborative laboratories to the Influenza-Respiratory Disease Unit, CDC and the WHO International Influenza-Center for the Americas, CDC.)

EPIDEMIOLOGIC NOTES AND REPORTS
HEAT-RESISTANT *CLOSTRIDIUM PERFRINGENS* OUTBREAK - Wisconsin

On February 24, 1966, over 366 students attending the University of Wisconsin developed mild gastroenteritis. Investigation indicated that illness was largely confined to three of the six dining halls serving the students and incriminated food served at the evening meal on February 23, 1966. These three dining halls served a choice of roast beef with gravy or fish as the entree, while the three other dining halls served a choice of hamburger or fish. All other foods were common to all dining halls. A total of 2,954 students had eaten that evening, according to the dietitian. Epidemiological evidence indicated that contaminated gravy was the source of the outbreak. The causative agent was *Clostridium perfringens*.

A food and illness questionnaire was distributed to students who ate in the three dining halls; 366 questionnaires were returned from ill students, 344 of which included time of onset, and 740 questionnaires were returned from well students. The clinical illness, which usually had a duration of less than 24 hours, was characterized primarily by diarrhea. About half of the students also experienced abdominal cramps, while nausea, vomiting, and fever were rare. The epidemic curve indicates a well demarcated incubation period of 14 hours (Figure 2).

Figure 2
OUTBREAK OF *CLOSTRIDIUM PERFRINGENS*
UNIVERSITY OF WISCONSIN - FEBRUARY 24, 1966



The attack rates among students who consumed the vulnerable foods are shown in Table 2. The 69.9 percent attack rate among those who ate roast beef and gravy,

the 4.9 percent attack rate among those who did not eat roast beef and gravy, and the complete absence of illness in 48 students who ate roast beef without gravy, incriminated the gravy as the source of the outbreak of epidemiological grounds.

Table 2
Clostridium perfringens Outbreak
 University of Wisconsin

Attack Rate in Students - February 24, 1966

Food	Consumed Food			Did Not Consume Food		
	No.	Ill	Attack Rate %	No.	Ill	Attack Rate %
Fish	391	16	4.1	715	340	47.6
Hamburger	188	15	8.0	918	351	38.2
Beef with gravy	479	335	69.9	627	31	4.9
Beef without gravy	48	0	0.0	1,058	366	34.6

An interview with the chief cook revealed that both beef bone stock and gravy left over from February 22 had been added to fresh gravy made for the roast beef. About 27 gallons of the left-over gravy had been placed in three plastic containers, each containing about 9 gallons, and placed in the refrigerator overnight. The next day 7 gallons of freshly made gravy were added to the left-over material taken from the refrigerator; the entire mixture was brought to a "rolling boil" and served.

Although no left-over food remained from the meal in question, test samples of each food item which are routinely collected and refrigerated for every meal were available for culture. No clostridia or other organisms were isolated under aerobic or anaerobic conditions. The gravy failed to produce illness in mice, but it is not known whether the test sample included the left-over gravy or was taken only from the fresh gravy prepared on February 23. Nineteen of 20 stool samples from ill students yielded abundant numbers of *Clostridium perfringens*; all of the isolates readily survived boiling for one hour. Among 24 stool specimens collected from kitchen personnel, only one yielded heat-resistant *Clostridium perfringens*.

The outbreak was attributed to heat-resistant *Clostridium perfringens* which had grown in the gravy at some time during preparation or during inadequate refrigeration in the three 9-gallon containers.

(Reported by Dr. A.S. Evans, Director, State Laboratory of Hygiene, Wisconsin; and Dr. Josef Preizler, Deputy Director, Section of Preventable Disease, Wisconsin State Board of Health.)

(Editorial Note on page 108)

FOR WEEKS ENDED

MARCH 26, 1966 AND MARCH 27, 1965 (12th WEEK)

AREA	ASEPTIC MENINGITIS		BRUCELLOSIS	ENCEPHALITIS			DIPHTHERIA		HEPATITIS		
				Primary including unsp. cases		Post- Infectious			Serum	Infectious	Both Types
	1966	1965		1966	1965	1966	1966	1965			
UNITED STATES...	20	27	6	17	28	17	5	-	24	685	770
NEW ENGLAND.....	1	1	1	2	1	1	-	-	1	17	47
Maine.....	-	1	-	-	-	-	-	-	-	2	3
New Hampshire.....	-	-	-	-	-	-	-	-	-	1	6
Vermont.....	-	-	-	-	-	-	-	-	-	-	1
Massachusetts.....	1	-	1	-	-	1	-	-	-	10	24
Rhode Island.....	-	-	-	-	-	-	-	-	1	2	8
Connecticut.....	-	-	-	2	1	-	-	-	-	2	5
MIDDLE ATLANTIC.....	2	-	-	3	6	5	-	-	13	103	138
New York City.....	-	-	-	-	2	-	-	-	9	28	30
New York, Up-State.....	-	-	-	2	-	-	-	-	-	30	42
New Jersey.....	1	-	-	1	3	-	-	-	4	12	35
Pennsylvania.....	1	-	-	-	1	5	-	-	-	33	31
EAST NORTH CENTRAL...	1	1	-	6	6	2	-	-	2	141	136
Ohio.....	-	-	-	2	4	-	-	-	1	32	27
Indiana.....	1	-	-	2	1	-	-	-	-	9	13
Illinois.....	-	-	-	1	1	-	-	-	1	41	31
Michigan.....	-	1	-	1	-	2	-	-	-	57	55
Wisconsin.....	-	-	-	-	-	-	-	-	-	2	10
WEST NORTH CENTRAL...	-	-	4	2	1	2	-	-	1	47	45
Minnesota.....	-	-	1	-	-	1	-	-	-	7	6
Iowa.....	-	-	2	-	-	1	-	-	-	20	20
Missouri.....	-	-	-	-	-	-	-	-	1	12	8
North Dakota.....	-	-	-	-	-	-	-	-	-	-	-
South Dakota.....	-	-	-	2	1	-	-	-	-	-	-
Nebraska.....	-	-	1	-	-	-	-	-	-	-	1
Kansas.....	-	-	-	-	-	-	-	-	-	8	10
SOUTH ATLANTIC.....	5	3	-	1	6	2	3	-	1	68	95
Delaware.....	3	1	-	-	-	-	-	-	-	1	7
Maryland.....	-	-	-	1	1	-	-	-	-	19	8
Dist. of Columbia..	-	-	-	-	-	-	3	-	-	2	3
Virginia.....	-	-	-	-	2	-	-	-	-	6	35
West Virginia.....	-	-	-	-	-	-	-	-	-	7	12
North Carolina.....	-	-	-	-	-	-	-	-	-	13	5
South Carolina.....	-	-	-	-	1	-	-	-	-	1	-
Georgia.....	-	-	-	-	-	-	-	-	-	2	4
Florida.....	2	2	-	1	2	1	-	-	1	17	21
EAST SOUTH CENTRAL...	-	8	-	-	2	1	-	-	-	77	72
Kentucky.....	-	7	-	-	-	-	-	-	-	36	33
Tennessee.....	-	1	-	-	-	1	-	-	-	28	25
Alabama.....	-	-	-	-	-	-	-	-	-	8	5
Mississippi.....	-	-	-	-	2	-	-	-	-	5	9
WEST SOUTH CENTRAL...	3	2	1	1	1	1	1	-	-	65	55
Arkansas.....	-	-	-	1	-	1	1	-	-	12	10
Louisiana.....	-	-	-	-	-	-	-	-	-	11	10
Oklahoma.....	-	-	-	-	-	-	-	-	-	7	1
Texas.....	3	2	1	-	1	-	-	-	-	35	34
MOUNTAIN.....	-	1	-	1	-	-	-	-	-	22	30
Montana.....	-	-	-	-	-	-	-	-	-	2	1
Idaho.....	-	-	-	-	-	-	-	-	-	-	1
Wyoming.....	-	-	-	-	-	-	-	-	-	-	-
Colorado.....	-	-	-	-	-	-	-	-	-	4	7
New Mexico.....	-	-	-	1	-	-	-	-	-	1	13
Arizona.....	-	-	-	-	-	-	-	-	-	12	6
Utah.....	-	1	-	-	-	-	-	-	-	3	2
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	8	11	-	1	5	3	1	-	6	145	152
Washington.....	1	-	-	-	1	-	1	-	-	5	15
Oregon.....	-	-	-	-	-	-	-	-	-	46	8
California.....	7	11	-	1	4	3	-	-	6	93	128
Alaska.....	-	-	-	-	-	-	-	-	-	-	-
Hawaii.....	-	-	-	-	-	-	-	-	-	1	1
Puerto Rico.....	-	-	-	-	-	-	-	-	-	26	36

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CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MARCH 26, 1966 AND MARCH 27, 1965 (12th WEEK) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			POLIOMYELITIS				RUBELLA
	1966	Cumulative		1966	Cumulative		Total		Paralytic		
		1966	1965		1966	1965	1966	1965	1966	Cumulative 1966	
UNITED STATES...	9,469	85,000	105,866	125	1,186	1,012	-	1	-	2	2,175
NEW ENGLAND.....	101	1,028	22,171	3	58	49	-	-	-	-	155
Maine.....	15	139	1,824	-	6	7	-	-	-	-	3
New Hampshire.....	-	12	300	-	7	2	-	-	-	-	-
Vermont.....	2	163	304	-	2	-	-	-	-	-	4
Massachusetts.....	49	376	12,415	3	24	19	-	-	-	-	57
Rhode Island.....	1	48	2,450	-	4	7	-	-	-	-	4
Connecticut.....	34	290	4,878	-	15	14	-	-	-	-	87
MIDDLE ATLANTIC.....	958	11,074	4,043	12	127	142	-	-	-	-	155
New York City.....	570	5,631	375	3	23	21	-	-	-	-	48
New York, Up-State.....	82	1,133	1,461	6	30	33	-	-	-	-	101
New Jersey.....	93	1,202	695	1	39	47	-	-	-	-	-
Pennsylvania.....	213	3,108	1,512	2	35	41	-	-	-	-	6
EAST NORTH CENTRAL...	3,113	33,399	18,599	16	172	120	-	-	-	-	629
Ohio.....	376	2,355	4,099	7	47	30	-	-	-	-	65
Indiana.....	102	2,043	735	4	24	16	-	-	-	-	89
Illinois.....	496	7,282	580	2	35	30	-	-	-	-	107
Michigan.....	683	5,183	9,754	2	51	23	-	-	-	-	124
Wisconsin.....	1,456	16,536	3,431	1	15	21	-	-	-	-	244
WEST NORTH CENTRAL...	483	3,899	8,538	9	63	57	-	1	-	-	73
Minnesota.....	127	1,148	226	3	13	13	-	1	-	-	-
Iowa.....	267	1,796	4,850	-	11	1	-	-	-	-	68
Missouri.....	55	279	1,126	5	25	32	-	-	-	-	2
North Dakota.....	27	631	2,090	-	3	3	-	-	-	-	3
South Dakota.....	1	3	51	1	2	2	-	-	-	-	-
Nebraska.....	6	42	195	-	3	2	-	-	-	-	-
Kansas.....	NN	NN	NN	-	6	4	-	-	-	-	-
SOUTH ATLANTIC.....	858	6,527	13,419	16	195	204	-	-	-	-	328
Delaware.....	7	91	238	1	1	3	-	-	-	-	2
Maryland.....	100	1,100	446	1	19	19	-	-	-	-	36
Dist. of Columbia.....	11	282	12	1	3	3	-	-	-	-	-
Virginia.....	54	549	1,978	-	23	22	-	-	-	-	98
West Virginia.....	459	2,717	8,716	1	8	13	-	-	-	-	34
North Carolina.....	12	129	156	3	41	33	-	-	-	-	-
South Carolina.....	46	324	341	2	27	25	-	-	-	-	42
Georgia.....	24	150	392	3	32	31	-	-	-	-	-
Florida.....	145	1,185	1,140	4	41	55	-	-	-	-	116
EAST SOUTH CENTRAL...	1,041	9,791	6,009	8	101	57	-	-	-	-	129
Kentucky.....	315	3,190	772	1	51	25	-	-	-	-	48
Tennessee.....	589	5,446	3,605	4	27	18	-	-	-	-	77
Alabama.....	54	734	1,215	2	17	10	-	-	-	-	4
Mississippi.....	83	421	417	1	6	4	-	-	-	-	-
WEST SOUTH CENTRAL...	1,532	8,412	14,248	28	187	164	-	-	-	1	18
Arkansas.....	201	322	780	2	11	9	-	-	-	-	-
Louisiana.....	1	53	30	15	69	83	-	-	-	-	-
Oklahoma.....	34	165	88	2	7	15	-	-	-	1	-
Texas.....	1,296	7,872	13,350	9	100	57	-	-	-	-	18
MOUNTAIN.....	478	4,354	8,411	3	37	40	-	-	-	-	335
Montana.....	73	688	2,316	1	3	-	-	-	-	-	151
Idaho.....	25	510	1,267	-	1	5	-	-	-	-	11
Wyoming.....	5	70	380	-	1	2	-	-	-	-	-
Colorado.....	116	492	1,419	1	21	9	-	-	-	-	35
New Mexico.....	37	184	294	1	5	6	-	-	-	-	-
Arizona.....	216	2,283	287	-	5	11	-	-	-	-	135
Utah.....	6	120	2,377	-	-	5	-	-	-	-	3
Nevada.....	-	7	71	-	1	2	-	-	-	-	-
PACIFIC.....	905	6,516	10,428	30	246	179	-	-	-	1	353
Washington.....	122	1,495	3,233	2	13	13	-	-	-	1	105
Oregon.....	68	531	1,571	1	9	14	-	-	-	-	38
California.....	706	4,422	4,555	24	209	147	-	-	-	-	203
Alaska.....	4	24	88	2	12	3	-	-	-	-	2
Hawaii.....	5	44	981	1	3	2	-	-	-	-	5
Puerto Rico.....	122	956	631	-	1	3	-	-	-	-	2

Morbidity and Mortality Weekly Report

CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED

MARCH 26, 1966 AND MARCH 27, 1965 (12th WEEK) - Continued

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1966	1966	Cum. 1966	1966	Cum. 1966	1966	Cum. 1966	1966	Cum. 1966	1966	Cum. 1966
UNITED STATES...	13,611	2	24	2	46	5	60	-	9	135	956
NEW ENGLAND.....	1,967	-	2	-	1	-	2	-	-	1	8
Maine.....	233	-	-	-	-	-	-	-	-	-	-
New Hampshire.....	30	-	-	-	-	-	-	-	-	1	3
Vermont.....	11	-	-	-	-	-	-	-	-	-	5
Massachusetts.....	506	-	2	-	1	-	-	-	-	-	-
Rhode Island.....	131	-	-	-	-	-	-	-	-	-	-
Connecticut.....	1,056	-	-	-	-	-	2	-	-	-	-
MIDDLE ATLANTIC.....	464	-	4	-	-	2	14	-	1	10	73
New York City.....	27	-	3	-	-	1	6	-	-	4	40
New York, Up-State.....	306	-	-	-	-	-	3	-	-	10	70
New Jersey.....	NN	-	-	-	-	-	3	-	-	-	-
Pennsylvania.....	131	-	1	-	-	1	2	-	1	-	3
EAST NORTH CENTRAL...	2,173	-	-	-	11	-	9	-	-	20	131
Ohio.....	300	-	-	-	3	-	5	-	-	13	75
Indiana.....	363	-	-	-	2	-	1	-	-	2	23
Illinois.....	461	-	-	-	5	-	-	-	-	3	12
Michigan.....	480	-	-	-	-	-	1	-	-	1	11
Wisconsin.....	569	-	-	-	1	-	2	-	-	1	10
WEST NORTH CENTRAL...	609	-	1	-	3	2	7	-	1	19	210
Minnesota.....	5	-	-	-	-	-	-	-	-	4	40
Iowa.....	312	-	-	-	-	-	2	-	-	5	50
Missouri.....	15	-	1	-	1	2	4	-	-	7	85
North Dakota.....	134	-	-	-	-	-	-	-	-	-	3
South Dakota.....	12	-	-	-	-	-	-	-	-	2	21
Nebraska.....	12	-	-	-	-	-	-	-	-	1	6
Kansas.....	119	-	-	-	2	-	1	-	1	-	5
SOUTH ATLANTIC.....	1,410	-	6	-	6	-	10	-	6	20	135
Delaware.....	58	-	-	-	-	-	-	-	-	-	-
Maryland.....	232	-	-	-	-	-	2	-	-	-	-
Dist. of Columbia..	-	-	-	-	-	-	-	-	-	-	-
Virginia.....	336	-	-	-	2	-	-	-	-	-	-
West Virginia.....	466	-	-	-	1	-	5	-	2	11	95
North Carolina.....	23	-	-	-	2	-	1	-	3	4	15
South Carolina.....	78	-	1	-	1	-	-	-	-	-	-
Georgia.....	13	-	2	-	-	-	-	-	1	2	15
Florida.....	206	-	3	-	-	-	1	-	-	3	10
EAST SOUTH CENTRAL...	2,042	1	1	-	12	-	5	-	-	17	146
Kentucky.....	131	-	-	-	2	-	1	-	-	2	19
Tennessee.....	1,688	-	-	-	6	-	3	-	-	15	124
Alabama.....	123	1	1	-	4	-	1	-	-	-	3
Mississippi.....	100	-	-	-	-	-	-	-	-	-	-
WEST SOUTH CENTRAL...	1,079	1	7	2	11	1	3	-	1	40	191
Arkansas.....	1	-	-	2	9	-	-	-	1	3	24
Louisiana.....	-	-	4	-	1	1	1	-	-	3	12
Oklahoma.....	29	-	-	-	-	-	1	-	-	14	30
Texas.....	1,049	1	3	-	1	-	1	-	-	20	125
MOUNTAIN.....	2,161	-	-	-	1	-	6	-	-	2	12
Montana.....	84	-	-	-	-	-	-	-	-	-	1
Idaho.....	196	-	-	-	-	-	-	-	-	-	-
Wyoming.....	50	-	-	-	-	-	-	-	-	-	-
Colorado.....	1,301	-	-	-	-	-	2	-	-	-	1
New Mexico.....	231	-	-	-	-	-	-	-	-	-	3
Arizona.....	113	-	-	-	-	-	1	-	-	2	7
Utah.....	186	-	-	-	1	-	3	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	1,706	-	3	-	1	-	4	-	-	6	50
Washington.....	672	-	-	-	-	-	-	-	-	-	-
Oregon.....	19	-	-	-	-	-	1	-	-	-	-
California.....	923	-	3	-	1	-	3	-	-	6	50
Alaska.....	18	-	-	-	-	-	-	-	-	-	-
Hawaii.....	74	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	11	6	9	-	-	-	3	-	-	-	1

Morbidity and Mortality Weekly Report

107

Week No.

DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED MARCH 26, 1966

12

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes	Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over				All Ages	65 years and over		
NEW ENGLAND:	738	433	51	51	SOUTH ATLANTIC:	1,181	634	61	71
Boston, Mass.-----	230	129	11	11	Atlanta, Ga.-----	159	75	7	12
Bridgeport, Conn.-----	56	33	5	1	Baltimore, Md.-----	234	115	14	17
Cambridge, Mass.-----	33	19	-	4	Charlotte, N. C.-----	47	21	2	5
Fall River, Mass.-----	23	10	-	3	Jacksonville, Fla.-----	62	34	2	3
Hartford, Conn.-----	57	29	7	5	Miami, Fla.-----	89	58	-	4
Lowell, Mass.-----	29	14	2	2	Norfolk, Va.-----	56	26	6	3
Lynn, Mass.-----	28	19	3	-	Richmond, Va.-----	96	40	2	5
New Bedford, Mass.-----	24	18	1	-	Savannah, Ga.-----	28	15	3	1
New Haven, Conn.-----	53	19	3	15	St. Petersburg, Fla.-----	81	68	3	1
Providence, R. I.-----	72	45	3	4	Tampa, Fla.-----	73	45	9	5
Somerville, Mass.-----	6	7	1	2	Washington, D. C.-----	204	107	10	14
Springfield, Mass.-----	45	34	7	1	Wilmington, Del.-----	52	30	3	1
Waterbury, Conn.-----	26	16	-	4					
Worcester, Mass.-----	55	42	8	1	EAST SOUTH CENTRAL:	646	347	32	31
MIDDLE ATLANTIC:	3,635	2,154	180	181	Birmingham, Ala.-----	107	56	4	2
Albany, N. Y.-----	47	29	-	2	Chattanooga, Tenn.-----	46	19	4	3
Allentown, Pa.-----	38	22	2	1	Knoxville, Tenn.-----	56	37	4	3
Buffalo, N. Y.-----	162	103	6	10	Louisville, Ky.-----	114	70	12	6
Camden, N. J.-----	50	26	1	7	Memphis, Tenn.-----	164	86	1	8
Elizabeth, N. J.-----	38	22	6	3	Mobile, Ala.-----	45	19	-	2
Erie, Pa.-----	37	28	2	1	Montgomery, Ala.-----	27	18	3	1
Jersey City, N. J.-----	68	46	5	3	Nashville, Tenn.-----	87	42	4	6
Newark, N. J.-----	86	40	3	3	WEST SOUTH CENTRAL:	1,134	580	55	84
New York City, N. Y.-----	1,799	1,059	90	85	Austin, Tex.-----	43	24	8	4
Paterson, N. J.-----	42	25	3	1	Baton Rouge, La.-----	32	20	-	1
Philadelphia, Pa.-----	686	397	21	37	Corpus Christi, Tex.-----	25	12	1	3
Pittsburgh, Pa.-----	216	121	8	11	Dallas, Tex.-----	158	80	11	10
Reading, Pa.-----	44	30	4	1	El Paso, Tex.-----	37	18	3	5
Rochester, N. Y.-----	97	66	9	6	Fort Worth, Tex.-----	74	35	4	4
Schenectady, N. Y.-----	23	13	3	1	Houston, Tex.-----	219	111	4	17
Scranton, Pa.-----	49	25	2	2	Little Rock, Ark.-----	29	18	2	3
Syracuse, N. Y.-----	51	36	4	2	New Orleans, La.-----	204	99	7	9
Trenton, N. J.-----	46	26	4	2	Oklahoma City, Okla.-----	86	51	2	4
Utica, N. Y.-----	24	18	4	2	San Antonio, Tex.-----	97	47	2	10
Yonkers, N. Y.-----	32	22	2	1	Shreveport, La.-----	55	25	4	5
EAST NORTH CENTRAL:	2,623	1,479	114	131	Tulsa, Okla.-----	56	29	7	3
Akron, Ohio-----	64	45	-	2	MOUNTAIN:	568	348	47	30
Canton, Ohio-----	46	32	9	1	Albuquerque, N. Mex.-----	43	23	10	3
Chicago, Ill.-----	794	437	32	38	Colorado Springs, Colo.-----	32	19	2	1
Cincinnati, Ohio-----	138	80	4	7	Denver, Colo.-----	143	86	6	6
Cleveland, Ohio-----	229	127	5	8	Ogden, Utah-----	35	21	-	3
Columbus, Ohio-----	111	57	1	6	Phoenix, Ariz.-----	181	110	19	9
Dayton, Ohio-----	80	57	12	-	Pueblo, Colo.-----	27	16	1	3
Detroit, Mich.-----	364	186	18	27	Salt Lake City, Utah-----	45	32	5	3
Evansville, Ind.-----	33	28	-	1	Tucson, Ariz.-----	62	41	4	2
Flint, Mich.-----	43	25	4	4	PACIFIC:	2,056	1,363	141	62
Fort Wayne, Ind.-----	46	33	1	1	Berkeley, Calif.-----	20	14	2	-
Cary, Ind.-----	42	18	5	3	Fresno, Calif.-----	47	32	3	2
Grand Rapids, Mich.-----	45	27	4	3	Glendale, Calif.-----	56	41	2	1
Indianapolis, Ind.-----	167	93	5	13	Honolulu, Hawaii-----	52	19	3	2
Madison, Wis.-----	39	20	-	2	Long Beach, Calif.-----	71	47	2	2
Milwaukee, Wis.-----	121	65	1	8	Los Angeles, Calif.-----	781	556	71	22
Peoria, Ill.-----	32	13	1	3	Oakland, Calif.-----	115	76	9	7
Rockford, Ill.-----	31	12	3	2	Pasadena, Calif.-----	47	34	3	3
South Bend, Ind.-----	32	20	-	-	Portland, Oreg.-----	107	71	-	1
Toledo, Ohio-----	94	60	3	1	Sacramento, Calif.-----	74	40	2	-
Youngstown, Ohio-----	72	44	2	1	San Diego, Calif.-----	121	78	8	-
WEST NORTH CENTRAL:	852	543	28	36	San Francisco, Calif.-----	214	115	7	10
Des Moines, Iowa-----	46	28	2	2	San Jose, Calif.-----	45	31	7	2
Duluth, Minn.-----	28	21	1	2	Seattle, Wash.-----	206	147	15	5
Kansas City, Kans.-----	40	21	3	3	Spokane, Wash.-----	58	37	4	3
Kansas City, Mo.-----	42	85	1	6	Tacoma, Wash.-----	42	25	3	2
Lincoln, Neb.-----	32	12	-	-	Total	13,433	7,881	709	677
Minneapolis, Minn.-----	98	58	2	5	Cumulative Totals				
Omaha, Neb.-----	60	41	2	3	Including reported corrections for previous weeks				
St. Louis, Mo.-----	283	184	11	10	All Causes, All Ages-----	160,422			
St. Paul, Minn.-----	61	41	3	2	All Causes, Age 65 and over-----	93,313			
Wichita, Kans.-----	49	32	3	3	Pneumonia and Influenza, All Ages-----	7,971			
					All Causes, Under 1 Year of Age-----	8,215			

*Estimate - based on average percent of divisional total.

HEAT-RESISTANT *CLOSTRIDIUM PERFRINGENS*

OUTBREAK - Wisconsin

(Continued from page 103)

Editorial Note:

The clinical and epidemiological pattern of *Clostridium perfringens* food poisoning is so characteristic as to be almost diagnostic. After an incubation period of 8 to 24 hours (usually 10 to 14 hours), the patient develops abdominal pain with nausea and diarrhea. Vomiting and fever are seldom present. The illness is of short duration and the patient is usually well within 24 hours.

Illness follows the ingestion of a food heavily contaminated with the causative organism. The food item is usually a meat dish or gravy which has been prepared on one day and served the following day after a short warming period. Creamed chicken, "turkey-a-la-king", and boiled or braised meats have been incriminated in outbreaks. The contaminated foods appear edible, rarely showing evidence of spoilage.¹ Occasionally when milk sauces of vegetables are involved, "stormy fermentation" has been observed.

The causal organism is *Cl. perfringens*, type A. Food poisoning strains are heat-resistant by virtue of spore formation, a property that allows the organism to survive cooking. The spores are ubiquitous on meats, and when conditions are favorable they germinate and prolific growth results within a few hours.

In outbreaks, the same serologic type of *Cl. perfringens* may often be isolated from the incriminated food and from a high proportion of stool specimens. Isolation of the organism is best accomplished after boiling the specimen for one hour. This procedure should not be used, however, in examining suspect foods, since only vegetative cells may be present.²

Prevention of clostridial food poisoning requires that meat dishes be eaten soon after thorough cooking. Where this is impractical, as for example in large institutions, cooked foods must be refrigerated promptly and reheated adequately immediately before serving.

References:

¹Hobbs, B.C., Smith, M.E., Oakley, C.L., Warrack, G.H., and Cruickshank, J.F.: *Clostridium welchii* food poisoning. J Hyg 71:75, 1953.

²Hobbs, B.C.: *Clostridium welchii* as a food poisoning organism. J Appl Bact 28(1):74-82, 1965.

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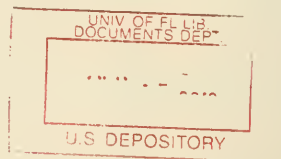
O. J. M. MCKENZIE, M.B.,
F.R.C.P.E.

IN ADDITION TO THE ESTABLISHED PROCEDURES FOR REPORTING MORBIDITY AND MORTALITY, THE COMMUNICABLE DISEASE CENTER WELCOMES ACCOUNTS OF INTERESTING OUTBREAKS OR CASE INVESTIGATIONS WHICH ARE OF CURRENT INTEREST TO HEALTH OFFICIALS AND WHICH ARE DIRECTLY RELATED TO THE CONTROL OF COMMUNICABLE DISEASES. SUCH COMMUNICATIONS SHOULD BE ADDRESSED TO:

THE EDITOR
MORBIDITY AND MORTALITY WEEKLY REPORT
COMMUNICABLE DISEASE CENTER
ATLANTA, GEORGIA 30333

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE CDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS. THE REPORTING WEEK CONCLUDES ON SATURDAY; COMPILED DATA ON A NATIONAL BASIS ARE RELEASED ON THE SUCCEEDING FRIDAY.

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